Printing

1995 TRI Releases for Printing Facilities (2711 - 2789) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Fugitive Air	Point Air	Water Discharges	Underground Injection	Land Disposal	Total Releases	Avg. Releases Per Facility
Toluene	106	15,454,685	11,321,925	58	0	172	26,776,840	252,612
Certain Glycol Ethers	82	535,072	649,284	260	0	0	1,184,616	14,447
Methyl Ethyl Ketone	63	652,508	1,462,006	0	0	379	2,114,893	33,570
Xylene (Mixed Isomers)	47	733,336	748,137	271	0	1,167	1,482,911	31,551
Zinc Compounds[M]	28	5	122	306	0	1,800	2,233	80
Copper[M]	23	0	34,144	45	0	0	34,189	1,486
Methanol	21	292,262	79,455	0	0	0	371,717	17,701
Methyl Isobutyl Ketone	18	87,271	291,732	0	0	189	379,192	21,066
Barium Compounds[M]	14	755	190	0	0	0	945	68
N-hexane	12	60,722	48,339	0	0	0	109,061	9,088
Copper Compounds[M]	11	0	0	37	0	0	37	3
1,2,4-trimethylbenzene	10	76,540	3,399	0	0	0	79,939	7,994
Ethylene Glycol	10	57,129	40,305	0	0	4,240	101,674	10,167
1,1,1-Trichloroethane[O]	9	191,203	207,530	0	0	0	398,733	44,304
N-butyl Alcohol	8	46,066	46,949	0	0	0	93,015	11,627
Dibutyl Phthalate	7	0	13,602	0	0	0	13,602	1,943
Ethylbenzene	7	17,848	32,582	0	0	0	50,430	7,204
Nitric Acid	7	255	1,054	13,401	0	0	14,710	2,101
Ammonia	6	10	38,537	0	0	0	38,547	6,425
Tetrachloroethylene[C]	4	64,500	10,874	0	0	0	75,374	18,844
N-methyl-2-pyrrolidone	4	46,369	22,374	0	0	0	68,743	17,186
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	3	38,210	21,053	0	0	0	59,263	19,754
Dichloromethane[C]	3	24,700	105,788	0	0	0	130,488	43,496
Trichloroethylene[C]	3	9,500	19,578	0	0	0	29,078	9,693
Nickel[C, M]	3	5	0	0	0	0	5	2
Ozone	3	8,260	112,416	0	0	0	120,676	40,225
Diisocyanates	2	0	755	0	0	0	755	378
Formaldehyde[C]	2	606	906	0	0	0	1,512	756
Phenol	2	2,190	2,690	0	0	0	4,880	2,440
2-ethoxyethanol	2	23,345	0	0	0	0	23,345	11,673
1,4-Dioxane[C]	2	3,000	14,016	0	0	0	17,016	8,508
Barium[M]	2	0	28,600	0	0	0	28,600	14,300
Chromium[M]	2	5	0	0	0	0	5	3
Antimony Compounds[M]	1	0	429	0	0	0	429	429
Cadmium Compounds[C, M]	1	0	60	0	0	0	60	60
Cyanide Compounds	1	97	0	0	0	0	97	97
Manganese Compounds[M]	1	5	0	.	0	0	5	5
Diethyl Sulfate[C]	1	597	5	0	0	0	602	602
Dimethyl Sulfate[C]	1	31	7	0	0	0	38	38
Phthalic Anhydride	1	0	58	0	0	0	58	58
Naphthalene	1	22,070	2,728	0	0	0	24,798	24,798
M-cresol	1	11	2	0	0	0	13	13
Di(2-ethylhexyl) Phthalate[C]	1	0	5	0	0	0	5	5
Triethylamine	1	250	16,800	0	0	0	17,050	17,050
Hydroquinone	1	0	5	0	0	0	5	5
Ethyl Acrylate[C]	1	1,328	158	0	0	0	1,486	1,486
Lead[C, M]	1	0	0	0	0	250	250	250
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	1	0	30,131	0	0	0	30,131	30,131
Sulfuric Acid	1	0	250	0	0	0	250	250
Chlorine	1	0	23,863	0	0	0	23,863	23,863
	262**	18,450,746	15,432,923	14,378	0	8,197	33,906,244	129,413

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

1995 TRI Transfers for Printing Facilities (SICS 2711 - 2789) by Number of Facilities Reporting (pounds/year)*

Chemical Name	# Reporting Chemical	Potw Transfers	Disposal Transfers	Recycling Transfers	Treatment Transfers	Energy Recovery Transfers	Total Transfers	Avg Transfer Per Facility
Toluene	106	6,147	15,440	4,050,982	160,932	1,923,151	6,156,652	58,082
Certain Glycol Ethers	82	117,549	97,360	30,904	56,609	667,830	970,252	11,832
Methyl Ethyl Ketone	63	17	1,000	219,801	204,375	1,107,789	1,532,982	24,333
Xylene (Mixed Isomers)	47	190	250	227,276	26,322	279,100	533,138	11,343
Zinc Compounds[M]	28	688	3,393	21,275	10,344	16,932	52,632	1,880
Copper[M]	23	808	1,002	330,668	37,377	31,785	401,640	17,463
Methanol	21	10,005	3,964	5,128	.	17,322	36,419	1,734
Methyl Isobutyl Ketone	18	0	1,250	27,951	42,459	62,989	138,515	7,695
Barium Compounds[M]	14	27	531	7,176	1,040	750	9,524	680
N-hexane	12	0	.	3,643	.	21,646	25,289	2,107
Copper Compounds[M]	11	643	2,600	26,714	139	500	30,596	2,781
1,2,4-trimethylbenzene	10	0	1,140	15,894	10,129	44,394	71,557	7,156
Ethylene Glycol	10	12,568	3,150	.	18,746	.	34,464	3,446
1,1,1-Trichloroethane[O]	9	255	.	10,018	.	75,275	85,548	9,505
N-butyl Alcohol	8	0	.	2,157	1,848	10,887	14,892	1,862
Dibutyl Phthalate	7	0	400	3,064	2,250	11,237	16,951	2,422
Ethylbenzene	7	170	.	.	514	19,567	20,251	2,893
Nitric Acid	7	25,051	.	.	255	.	25,306	3,615
Ammonia	6	0	.	500	143	.	643	107
Tetrachloroethylene[C]	4	0	18	20,448	10,062	29,187	59,715	14,929
N-methyl-2-pyrrolidone	4	0	.	13,243	.	49,192	62,435	15,609
Isopropyl Alcohol (Manufacturing, Strong-acid Process Only)	3	0	1,134	12,076	.	14,046	27,256	9,085
Dichloromethane[C]	3	0	.	.	9,091	379	9,470	3,157
Trichloroethylene[C]	3	0	0	8,116	.	.	8,116	2,705
Nickel[C, M]	3	5	.	22,504	1,200	.	23,709	7,903
Ozone	3	0	.	.	.	.	0	0
Diisocyanates	2	0	.	.	.	.	0	0
Formaldehyde[C]	2	0	.	.	.	.	0	0
Phenol	2	0	.	.	.	.	0	0
2-ethoxyethanol	2	0	12,345	.	.	6,000	18,345	9,173
1,4-Dioxane[C]	2	0	5	.	250	500	755	378
Barium[M]	2	0	.	.	.	.	0	0
Chromium[M]	2	0	5	.	5	.	10	5
Antimony Compounds[M]	1	0	.	3,468	406	557	4,431	4,431
Cadmium Compounds[C, M]	1	0	.	2,273	.	.	2,273	2,273
Cyanide Compounds	1	9	.	.	226	.	235	235
Lead Compounds[C, M]	1	18	.	5,268	76	426	5,788	5,788
Manganese Compounds[M]	1	0	250	.	.	.	250	250
Diethyl Sulfate[C]	1	0	.	.	.	.	0	0
Dimethyl Sulfate[C]	1	0	.	.	.	.	0	0
Phthalic Anhydride	1	0	.	.	.	.	0	0
Naphthalene	1	0	.	9,557	.	.	9,557	9,557
M-cresol	1	0	19	.	.	.	19	19
Di(2-ethylhexyl) Phthalate[C]	1	0	6,400	.	.	.	6,400	6,400
Triethylamine	1	0	.	.	.	250	250	250
Hydroquinone	1	1,638	.	.	.	.	1,638	1,638
Ethyl Acrylate[C]	1	0	.	.	.	.	0	0
Lead[C, M]	1	0	.	40,433	.	.	40,433	40,433
Hydrochloric Acid (1995 and after "Acid Aerosols" Only)	1	0	.	.	.	.	0	0
Sulfuric Acid	1	0	.	.	.	.	0	0
Chlorine	1	0	.	.	.	.	0	0
	262**	175,788	151,656	5,120,537	594,798	4,391,691	10,438,336	39,841

[C] Known or suspect carcinogens [M] Metals and metal compounds [O] Ozone depleters

* Refer to Section III for a discussion of the TRI data and its limitations, methodology used to obtain this data, definitions of the column headings, and the definitions of carcinogens, metals, and ozone depleters.

**Total number of facilities (not chemical reports) reporting to TRI in this industry sector.

Ten Largest Volume TRI Releasing Printing Facilities Reporting Only SIC 2711-2789*		
Rank	**Facility[1]**	**Total TRI Releases in Pounds**
1	Quebecor Printing Inc., Dickson, Tenness	2,470,345
2	R. R. Donnelley & Sons Co., Warsaw, Indiana	2,109,441
3	World Color, Corinth, Mississippi	1,633,920
4	Quebecor Printing, Richmond, Virginia	1,390,514
5	R. R. Donnelley & Sons Co., Gallatin, Tennessee	1,371,130
6	World Color Press Inc., Dyersburg, Tennessee	1,363,008
7	R. R. Donnelley Printing Co., Lynchburg, Virginia	1,290,000
8	World Color Press Inc., Salem, Illinois	1,200,800
9	Brown Printing Co., Franklin, Kentucky	1,124,838
10	Quebecor Printing Memphis Inc., Memphis, Tennessee	1,116,925

Source: *US EPA 1995 Toxics Release Inventory Database.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

Ten Largest Volume TRI Releasing Facilities Reporting Only SICS 2711 - 2789 or SICS 2711 - 2789 and Other SIC Codes*			
Rank	**Facility[1]**	**SIC Codes Reported in TRI**	**Total TRI Releases in Pounds**
1	Quebecor Printing Inc., Dickson, Tennessee	2754	2,470,345
2	R. R. Donnelley & Sons Co., Warsaw, Indiana	2754	2,109,441
3	World Color, Corinth, Mississippi	2752, 2754	1,633,920
4	Quebecor Printing, Richmond, Virginia	2754	1,390,514
5	R. R. Donnelley & Sons Co., Gallatin, Tennessee	2754	1,371,130
6	World Color Press Inc., Dyersburg, Tennessee	2752, 2754	1,363,008
7	R. R. Donnelley Printing Co., Lynchburg, Virginia	2754	1,290,000
8	World Color Press Inc., Salem, Illinois	2752, 2754	1,200,800
9	Brown Printing Co., Franklin, Kentucky	2754	1,124,838
10	Quebecor Printing Memphis Inc., Memphis, Tennessee	2754	1,116,925

Source: *US EPA Toxics Release Inventory Database, 1995.*
*Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Ten Largest Volume TRI Releasing Facilities*.

[1] Being included on this list does not mean that the release is associated with non-compliance with environmental laws.

Source Reduction and Recycling Activity for Printing Facilities (SICs 2711-2789) as Reported within TRI*

A	B	C	On-Site			Off-Site			J
			D	E	F	G	H	I	% Released and Disposed[c] Off-site
Year	Quantity of Production-Related Waste (10^6 lbs.)[a]	% Released and Transferred[b]	% Recycled	% Energy Recovery	% Treated	% Recycled	% Energy Recovery	% Treated	
1994	308	16%	66%	0%	19%	2%	1%	0%	11%
1995	310	14%	64%	0%	22%	2%	1%	0%	10%
1996	314	---	63%	0%	24%	2%	1%	0%	10%
1997	318	---	62%	0%	26%	2%	%	0%	9%

Source: *1995 Toxics Release Inventory Database*.

* Refer to Section III for a general discussion of TRI data and its limitations. A discussion of the methodology used to develop this table can be found under the heading *Source Reduction and Recycling Activity*.

[a] Within this industry sector, non-production related waste < 1% of production related wastes for 1995.

[b] Total TRI transfers and releases as reported in Section 5 and 6 of Form R as a percentage of production related wastes.

[c] Percentage of production related waste released to the environment and transferred off-site for disposal.

Five-Year Enforcement and Compliance Summary for the Printing Industry*

A	B	C	D	E	F	G	H	I	J
Region	**Facilities in Search**	**Facilities Inspected**	**Number of Inspections**	**Average Months Between Inspections**	**Facilities with 1 or More Enforcement Actions**	**Total Enforcement Actions**	**Percent State Lead Actions**	**Percent Federal Lead Actions**	**Enforcement to Inspection Rate**
I	500	168	392	77	21	27	85%	15%	0.07
II	438	220	707	37	35	93	96%	4%	0.13
III	1,137	359	1,534	44	31	44	91%	9%	0.03
IV	1,308	442	2,142	37	56	129	94%	6%	0.06
V	675	402	1,416	29	40	51	63%	37%	0.04
VI	535	99	282	114	24	44	84%	16%	0.16
VII	558	178	702	48	16	21	81%	19%	0.03
VIII	224	104	184	73	3	3	67%	33%	0.02
IX	239	67	247	58	7	10	100%	0%	0.04
X	248	53	85	175	5	6	67%	33%	0.07
TOTAL	5,862	2,092	7,691	46	238	428	88%	12%	0.06

*Data obtained from EPA's Integrated Data for Enforcement Analysis (IDEA) System. For a description of IDEA and the methods used to obtain this data, refer to Section II.C. A discussion of this table can be found under the heading, *Five-Year Enforcement and Compliance Summary*, in Section III.